Date: 2023-04-11
Flight Campaign ID: P3C1
Airport, FBO ID, City: Boulder Municipal Airport (KBDU) - Boulder, CO
Aircraft: N934MU

Domain: 00 (Training & Calibration)
Sites Flown: R10C (Table Mountain Radiometric Calibration - Riegl), V10C (Boulder City South)
Days left in Domain: 7

Report Author: Mike
Lidar Operators: Mike
Spectrometer Operators: John
Pilots: Jeff, Paul N
GPS Instruments: AOP_KBDU
Ground Crew: Nick

Summary
Skies were clear and beautiful in Boulder today. P3 reached optimal temperature last night and was taken out for the Table Mountain Radiometric, with Bridget and Murph on the ground performing ASD measurements. After that the flight crew collected a few testing and training lines at Boulder City South.

Concerns
None

Comments
During the Boulder City South collection, three total Lidar lines were collected at 25% power and 400, 360, and 280 khz PRR rates. No issues were witnessed.

Daily Coverage

Estimated Cloud Cover Key

<table>
<thead>
<tr>
<th>Green:</th>
<th>Yellow:</th>
<th>Red:</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10%</td>
<td>11-50%</td>
<td>&gt;50%</td>
</tr>
</tbody>
</table>

D00|R10C

<table>
<thead>
<tr>
<th>Line #</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lidar</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Spectrometer</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Camera</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Cloud Cover</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Total number of lines flown: 5
<table>
<thead>
<tr>
<th>Line #</th>
<th>1</th>
<th>20</th>
<th>23</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lidar</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Spectrometer</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Camera</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Cloud Cover

Total number of lines flown: 3

### Flight Screenshots

NIS radiometric flight plan, Lidar not active

NIS - V10C

Lidar – V10C
Pictures

- Calibration tarps at Table Mountain
- Clear skies above the entire area including Mt. Meeker and Long’s Peak

Cumulative Domain Coverage

**D00|B10E (Riegl Boresight Calibration - 1600m, 1000m, 500m)**

- Flown: 0% (0/20)
- Green: 0% (0/20)
- Yellow: 0% (0/20)
- Red: 0% (0/20)

**D00|H10C (NEON Headquarters Lidar Test - Riegl)**

- Flown: 100% (4/4)
- Green: 0% (0/4)
- Yellow: 0% (0/4)
- Red: 100% (4/4)

**D00|N10D (Nominal Runway at KBDU - Riegl)**

- Flown: 14% (4/28)
- Green: 14% (4/28)
- Yellow: 0% (0/28)
- Red: 0% (0/28)

**D00|O10B (NIS Offset - Riegl)**

- Flown: 0% (0/2)
- Green: 0% (0/2)
- Yellow: 0% (0/2)
- Red: 0% (0/2)
D00|R10C (Table Mountain Radiometric Calibration - Riegl)

- Flown: 100% (5/5)
- Green: 100% (5/5)
- Yellow: 0% (0/5)
- Red: 0% (0/5)

D00|R10D (Boulder Airport Radiometric Calibration)

- Flown: 100% (5/5)
- Green: 100% (5/5)
- Yellow: 0% (0/5)
- Red: 0% (0/5)

D00|V10C (Boulder City South)

- Flown: 21% (6/29)
- Green: 10% (3/29)
- Yellow: 0% (0/29)
- Red: 10% (3/29)

D00|W10C (Wiggle Timing Test - Riegl)

- Flown: 100% (2/2)
- Green: 0% (0/2)
- Yellow: 0% (0/2)
- Red: 100% (2/2)

Weather Forecast

<table>
<thead>
<tr>
<th>Date</th>
<th>Temperature</th>
<th>Condition</th>
<th>Precipitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed 4/12</td>
<td>80°</td>
<td>54°F</td>
<td>Mostly Sunny</td>
</tr>
<tr>
<td>Thu 4/13</td>
<td>76°</td>
<td>43°F</td>
<td>Mostly Cloudy</td>
</tr>
<tr>
<td>Fri 4/14</td>
<td>50°</td>
<td>33°F</td>
<td>Showers</td>
</tr>
<tr>
<td>Sat 4/15</td>
<td>59°</td>
<td>35°F</td>
<td>Sunny</td>
</tr>
<tr>
<td>Sun 4/16</td>
<td>69°</td>
<td>40°F</td>
<td>Sunny</td>
</tr>
<tr>
<td>Mon 4/17</td>
<td>74°</td>
<td>45°F</td>
<td>Partly Cloudy</td>
</tr>
<tr>
<td>Tue 4/18</td>
<td>74°</td>
<td>44°F</td>
<td>Partly Cloudy</td>
</tr>
</tbody>
</table>

source: wunderground.com
Flight Collection Plan for April 12th, 2023

Flyority 1
Collection Area: Boresight Calibration – Greeley, CO
Flight Plan Name: D10_B10E_Boresight_1600m_Q780 (RiAcquire name: D10_B10E_Boresight_Apx_Q780)
30° On-station Time: 1510 UTC / 0910 L
Additional Considerations: No recent snowfall, clear roofs required.

Flyority 2
Collection Area: Nominal Runway Survey Flight Plan
Name: D10_N10D_Nominal_Rnwy_v8_Q780
On-Station Time: Daylight – No solar angle restrictions.
Additional Considerations: Runway should not be wet or snow covered.

Flyority 3
Collection Area: NIS Offset Flight
Flight Plan Name: D10_O10B_NIS_Offset_v2_Q780
35° On-station Time: 1540 UTC / 0940L

Crew: Mike, John, Nick, Matt